

CLAIMS

1. A method of detecting a virus in an avian tissue sample comprising:
extracting genetic material from an avian tissue sample; and testing
the extracted genetic material to detect any genetic material from the
virus; characterised in that the avian tissue sample is derived from
one or more feathers of the axillary tract.
2. A method of detecting a virus as claimed in Claim 1 wherein the
method provides quantitative information on the amount of the virus
in the sample.
3. A method of detecting a virus as claimed in Claim 1 or 2 wherein the
method is specific for MDV.
4. A method as claimed in Claim 3 wherein the method is specific for
MDV serotype 1.
5. A method of detecting MDV as claimed in Claim 4 wherein the
method is specific for MDV-1 Rispens strain CVI 988.
6. A method as claimed in Claim 5 wherein the method comprises:
 - (i) providing forward and reverse primers for a nucleic acid
polymerase, which primers are selected from the nucleotide
sequence which flanks the 132 bp repeat nucleotide sequence
of MDV;
 - (ii) amplifying nucleic acid sequences between the primers;
 - (iii) detecting the number of 132 bp repeat sequences in the
amplified nucleic acid sequences; and

- (iv) relating the number of 132 bp repeat sequences to the identity of the viral nucleic acid and thereby identifying the type of MDV in the tissue sample.
7. A method as claimed in any one of Claims 1 to 5 which comprises
- (a) providing a polynucleotide sequence which is capable of binding specifically to a virus-specific target polynucleotide;
 - (b) contacting the extracted genetic material with a probe whereby the probe binds specifically to its target viral polynucleotide;
 - (c) determining whether the probe has bound to its target viral polynucleotide; and
 - (d) determining whether the sample contains the virus on the basis that the presence of the target polynucleotide indicates the presence of the virus in the sample.
8. A method as claimed in Claim 7 wherein the step (c) of determining whether the probe has bound to a target polynucleotide comprises amplifying a region of the target polynucleotide, which region comprises the binding site of the probe.
9. A method as claimed in Claim 8 wherein amplification is primed by the following primers:

Forward primer (GGT CTG GTG GTT TCC AGG TGA)

Reverse primer (GCA TAG ACG ATG TGC TGC TGA)

10. A method as claimed in Claim 9 wherein the probe has the sequence
5' AGA CCC TGA TGA TCC GCA TTG CGA CT 3'
11. A method as claimed in any one of Claims 7 to 10 wherein the probe is labelled fluorescently and wherein the step of determining whether the probe has bound to a target polynucleotide comprises determining the fluorescent emissions of the probe.
12. A method of detecting a virus as claimed in any preceding claim wherein the method involves the use of a PCR reaction
13. A method as claimed in Claim 12 wherein before said PCR reaction is carried out, the extracted genetic material to be tested is treated with an agent to overcome the inhibitory effect of any feather tissue factor which may be present.
14. A method of detecting a virus as claimed in Claim 13 wherein the agent is selected from one or more of bovine serum albumin; porcine (pig) albumin; and ovine (sheep) albumin.
15. A method as claimed in any preceding claim further comprising a step of furnishing the results of the method in an intelligible format.
16. A method as claimed in Claim 15 wherein the results are furnished by recording or storing the results of the method on an information carrier.
17. An isolated avian tissue sample from one or more feathers from the axillary tract.

18. An isolated avian tissue sample as claimed in Claim 17 wherein the proximal portion of the axillary tract feather is isolated from the distal (barbed) portion of the feather.
19. A genetic material – containing extract from an isolated avian tissue sample as claimed in Claim 17 or 18.
20. A sample or extract as claimed in Claim 17, 18 or 19 wherein the sample is stored in a form suitable for transport to a separate location.
21. A sample as claimed in Claim 20 wherein the sample or extract is contained in a sealed container.